CLAIMS

What is claimed is:

1. A subscriber unit that receives data and a transmit power control (TPC) signal over a wireless communication downlink signal, comprising:

an RF power amplifier (12) with a bias point for amplifying the communication signal to produce an RF output signal;

a detector (14), for receiving said communication signal and removing modulation components from said communication signal to provide a detector output signal;

a converter (16), coupled to said detector, configured to process said TPC signal and said detector output signal to generate a current signal; and

a current mirror (18) for receiving said current signal and a feedback from said RF output signal and for comparing said current signal with said feedback to produce a bias signal; whereby said bias point of the RF amplifier is dynamically adjusted responsive to said bias signal.

2. The subscriber unit of claim 1, whereby said converter performs said processing by weighting both said TPC signal and said detector output signal and then combining said TPC and detector output signals.

3. The subscriber unit of claim 1, whereby said current mirror further scales said current signal and said feedback signal prior to said comparison.

4. The subscriber unit of claim 2, whereby said current mirror further scales said current signal and said feedback signal prior to said comparison.

5. The subscriber unit of claim 1, whereby said communication signal is a CDMA signal.

6. In a subscriber unit that receives data over a wireless communication downlink signal and a transmit power control (TPC) signal, a method for dynamically adjusting the operating bias of an RF power amplifier that amplifies a communication signal for transmission by the subscriber unit, the method comprising:

receiving said communication signal and said TPC signal;

removing modulation components from said communication signal to produce a dc voltage signal;

processing said TPC signal and said dc voltage signal to generate a current signal;

comparing said current signal with a feedback from the output of said RF power amplifier to produce a bias signal; and

dynamically adjusting the operating bias of said RF amplifier using said bias signal.

7. The method of claim 6, whereby said processing step includes weighting said TPC signal and said dc voltage signal and then combining said weighted TPC and detector output signals.

8. The method of claim 6, whereby said comparing step further includes scaling said current signal and said feedback signal prior to said comparison.

9. The method of claim 7, whereby said comparing step further includes scaling said current signal and said feedback signal prior to said comparison.

10. The method of claim 6, whereby said communication signal is a CDMA signal.